

Appendix A: ClustalW Alignment of SEQ ID NO: 36 (CG55069-01) and SEQ ID NO: 38 (CG55069-02)

CG55069-01 1 MDVKERRPFGSLTKSRREKERYTHSSADHEECRVPTQKSYSSSETLKAFDHDSSRLLYG 60
CG55069-02 1 MDVKERRPFGSLTKSRREKERYTHSSADHEECRVPTQKSYSSSETLKAFDHDSSRLLYG 60

CG55069-01 61 NRVKDLVHREAEFTTQQQHFTRQGLQVCEPATRRGLAFCAEMOLPHRGVYSIAGSDADT 120
CG55069-02 61 NRVKDLVHREAEFTTQQQHFTRQGLQVCEPATRRGLAFCAEMOLPHRGVYSIAGSDADT 120

CG55069-01 121 ENEAVMSIEHMHRLWROVLSGRSSCLSSRSNSALTLTDTENHNKSDSENEQFASHQGQS 180
CG55069-02 121 ENEAVMSIEHMHRLWROVLSGRSSCLSSRSNSALTLTDTENHNKSDSENEQFASHQGQS 180

CG55069-01 181 TLQPLPPSHIQHSAQHPSITSLHNSLTHRRNQSPAPPAALPAELQTTPEVQLQDSWV 240
CG55069-02 181 TLQPLPPSHIQHSAQHPSITSLHNSLTHRRNQSPAPPAALPAELQTTPEVQLQDSWV 240

CG55069-01 241 LQSNVPLESRHFLFKTOTGTTPLFSTATPOVTMASSQVSEPTPLPRLPNTLSRSARFKK 300
CG55069-02 241 LQSNVPLESRHFLFKTOTGTTPLFSTATPOVTMASSQVSEPTPLPRLPNTLSRSARFKK 300

CG55069-01 301 SSKYGSWKTALCAVGVSVLLAILLSYFIAMHLFGLHWQLQQTENDTFENGKVNSDTMTPT 360
CG55069-02 301 SSKYGSWKTALCAVGVSVLLAILLSYFIAMHLFGLHWQLQQTENDTFENGKVNSDTMTPT 360

CG55069-01 361 NTYSLPSSQDHGLQOFTQENHTIDSQELDIOERRAIOEIPPOIFWRSOLFIDQPFKFNH 420
CG55069-02 361 NTYSLPSSQDHGLQOFTQENHTIDSQELDIOERRAIOEIPPOIFWRSOLFIDQPFKFNH 420

CG55069-01 421 SLQKDALIGVYGRKCLPPSHTQSSPYQDFVELLDGSKLIAREQRSLLETERAGRQARSVS 480
CG55069-02 421 SLQKDALIGVYGRKCLPPSHTQSSPYQDFVELLDGSKLIAREQRSLLETERAGRQARSVS 480

CG55069-01 481 LHEAOFIQYLDGSIWHLAFYNDGKNAEQVSFNTIVIESVVECFRNCHGNGECVSGTCHCF 540
CG55069-02 481 LHEAOFIQYLDGSIWHLAFYNDGKNAEQVSFNTIVIESVVECFRNCHGNGECVSGTCHCF 540

CG55069-01 541 PGLFLOPDCSRAACPVLCGNGQYSKORCLCFSGWGTGECDFVTTCIDFQCGGRCICIMG 600
CG55069-02 541 PGLFLOPDCSRAACPVLCGNGQYSKORCLCFSGWGTGECDFVTTCIDFQCGGRCICIMG 600

CG55069-01 601 SCACSSQVKGESCEADCDIDPCSNHGVCIHGECHCSFGWQGSNCEILKTMCPDQCSGHC 660
CG55069-02 591 SCACSSQVKGESCEADCDIDPCSNHGVCIHGECHCSFGWQGSNCEILKTMCPDQCSGHC 656

CG55069-01 661 TYLQESQSCDTPHWTGPDGSHETCSVDGSSHOVCMQOTCRCEEOWTGFACHGRACHPRC 720
CG55069-02 657 TYLQESQSCDTPHWTGPDGSHETCSVDGSSHOVCMQOTCRCEEOWTGFACHGRACHPRC 716

CG55069-01 721 AEHGTCKDKKCECSQGNWGHETIAHYLDRIVDKIGYKGGCFOLGNSHGRCTLDQNGGH 780
CG55069-02 717 AEHGTCKDKKCECSQGNWGHETIAHYLDRIVDKIGYKGGCFOLGNSHGRCTLDQNGGH 776

CG55069-01 781 CYCOPGWRAGGCVAMETLCTDSKHEDDGLIDCHMDPCCQLQSSQNGFYCRGLPDPQDI 840
CG55069-02 777 CYCOPGWRAGGCVAMETLCTDSKHEDDGLIDCHMDPCCQLQSSQNGFYCRGLPDPQDI 836

CG55069-01 841 ISQSLSQSPQAAKSFYDRISFLIOSDSTHVIPGESPPHKSLSASVIRQVLTADGTPFLIG 900
CG55069-02 837 ISQSLSQSPQAAKSFYDRISFLIOSDSTHVIPGESPPHKSLSASVIRQVLTADGTPFLIG 896

CG55069-01 901 VNVSEFFHVEPYGYTITRODGMFDLVAKOGASLTIVFERSPELTQYHTWIPVHWVYVMDT 960
CG55069-02 897 VNVSEFFHVEPYGYTITRODGMFDLVAKOGASLTIVFERSPELTQYHTWIPVHWVYVMDT 956

CG55069-01 961 LVMEKEENDIFSCDLSGVPVRPHFIIVSSPLSTFFRSSPDSPIIPETQVLEHETTFIOTD 1020
CG55069-02 957 LVMEKEENDIFSCDLSGVPVRPHFIIVSSPLSTFFRSSPDSPIIPETQVLEHETTFIOTD 1016

CG55069-01 1021 EKL SVLS SRAAGYKSVLKITMTOSIIFNLMKVHLMVAVVRQLFQKWFASPHLAYTFIW 1080
CG55069-02 1017 EKL SVLS SRAAGYKSVLKITMTOSIIFNLMKVHLMVAVVRQLFQKWFASPHLAYTFIW 1076

CG55069-01 1081 DKTDAVNHQVYGLSEAVVSVGVESCLDLTLWEKRTALIQOVELDASNMGGWTLDKHHV 1140
CG55069-02 1077 DKTDAVNHQVYGLSEAVVSVGVESCLDLTLWEKRTALIQOVELDASNMGGWTLDKHHV 1136

CG55069-01 1141 LDVQNGILYKCHGNGHFISSQFFVYSSIMGNRRRSISCFSCHQADONKLLAFVALACC 1200
CG55069-02 1137 LDVQNGILYKCHGNGHFISSQFFVYSSIMGNRRRSISCFSCHQADONKLLAFVALACC 1196

CG55069-01 1201 IDGSLYVDGDFNVRRIFPSOHVTSVLELRHKDFRHSHPAHRYVLATDFVTODLVSDTN 1260
CG55069-02 1193 IDGSLYVDGDFNVRRIFPSOHVTSVLELRHKDFRHSHPAHRYVLATDFVTODLVSDTN 1256

CG55069-01 1261 TRKIVRPKSLTAKDLTKNAEVAAGTGEQCLPFDEARCGDGGKAVEATLMSPKGMADVKN 1320
CG55069-02 1257 TRKIVRPKSLTAKDLTKNAEVAAGTGEQCLPFDEARCGDGGKAVEATLMSPKGMADVKN 1316

CG55069-01 1321 SLYVYDGMTHIRKVDQNGIISFLIOSHDLTSARPLTCDTSMHIISQVLEWPTDLAINPMD 1380
CG55069-02 1317 SLYVYDGMTHIRKVDQNGIISFLIOSHDLTSARPLTCDTSMHIISQVLEWPTDLAINPMD 1376

CG55069-01 1381 NSIYVLDHNVVLOITENRQVRIAAGRFMHQCVQVPEYVPGKHAQVOTLESAIAVSYSG 1440
CG55069-02 1373 NSIYVLDHNVVLOITENRQVRIAAGRFMHQCVQVPEYVPGKHAQVOTLESAIAVSYSG 1436

CG55069-01 1441 VLYITETDEKKINRIQVITDGEISLVAGIPSECDCKHDANDCCYQSGDQYAKDAKL SAI 1500
CG55069-02 1437 VLYITETDEKKINRIQVITDGEISLVAGIPSECDCKHDANDCCYQSGDQYAKDAKL SAI 1496

CG55069-01 1501 SSLAASPDTGLYIADLGNIRIAVSKKPLLSHNMFFYEVASPTDQELVFDINGTHQVTV 1560
CG55069-02 1497 SSLAASPDTGLYIADLGNIRIAVSKKPLLSHNMFFYEVASPTDQELVFDINGTHQVTV 1556

CG55069-01 1561 SLVTDQVLYIFSYSHNDNITAVTDSHGNLTIRIKRDPNRMFVRVSPDNQVILWLTIGTHGQ 1620
CG55069-02 1557 SLVTDQVLYIFSYSHNDNITAVTDSHGNLTIRIKRDPNRMFVRVSPDNQVILWLTIGTHGQ 1616

CG55069-01 1621 LKGMTAQGLLELVFTYHNSGLLAKESDETGWTTFFDYDSEGLTNWTFPTGVVTHLGG 1680
CG55069-02 1617 LKGMTAQGLLELVFTYHNSGLLAKESDETGWTTFFDYDSEGLTNWTFPTGVVTHLGG 1676

CG55069-01 1681 MDKAITVDIESSRREDVSITNLSSISDFYTMVQDQLRNSYQIYGDOSLRILIIASOLDS 1740
CG55069-02 1677 MDKAITVDIESSRREDVSITNLSSISDFYTMVQDQLRNSYQIYGDOSLRILIIASOLDS 1736

CG55069-01 1741 HYQTEPHVLAQTAHPTAKRHNTLPGEHGHQLVEWRFRKEQAQKQVNVQRKLRVHGRH 1800
CG55069-02 1733 HYQTEPHVLAQTAHPTAKRHNTLPGEHGHQLVEWRFRKEQAQKQVNVQRKLRVHGRH 1796

CG55069-01 1801 LSVDFDRTTETKLYDDHRKFLIRIAYDTSQHPITLWLPSSKLMVHVTVSSTGOIASIQE 1860
CG55069-02 1797 LSVDFDRTTETKLYDDHRKFLIRIAYDTSQHPITLWLPSSKLMVHVTVSSTGOIASIQE 1856

CG55069-01 1861 SITSEKVDYDQQRIVSRVFAQKTSYTYLEKSNVLLHSQKQVIFSYDNWDRLSAITM 1920
CG55069-02 1857 SITSEKVDYDQQRIVSRVFAQKTSYTYLEKSNVLLHSQKQVIFSYDNWDRLSAITM 1916

CG55069-01 1921 PSVAASHTHQITRSIGYVNIYRFPESNASIITDYNEEGLLQTAFLQTSRVLFRYRQT 1980
CG55069-02 1917 PSVAASHTHQITRSIGYVNIYRFPESNASIITDYNEEGLLQTAFLQTSRVLFRYRQT 1976

CG55069-01 1981 RLSEILYDSTRVSPTYDGAOVLKTVNLSQDFICTIRYRQIGPLIDQIFRFSEDGMVN 2040
CG55069-02 1977 RLSEILYDSTRVSPTYDGAOVLKTVNLSQDFICTIRYRQIGPLIDQIFRFSEDGMVN 2036

CG55069-01 2041 ARFDYSYDMSFRVTSMQQVINEPLPIDLYQFDDISGKVEQFGKFGVVIYDINQIISTAV 2100
CG55069-02 2037 ARFDYSYDMSFRVTSMQQVINEPLPIDLYQFDDISGKVEQFGKFGVVIYDINQIISTAV 2096

CG55069-01 2101 NTYTKHFDAGHRIKIQEIFSLMWYITIQYDNMGVTEREIKIOPFANTTEYAYEYDV 2160
CG55069-02 2097 NTYTKHFDAGHRIKIQEIFSLMWYITIQYDNMGVTEREIKIOPFANTTEYAYEYDV 2156

CG55069-01 2161 DQQLQTVLIERIMWRYNVYDLRGNLHLLRPSHSARITPLRYDLRKRITRLGQVQVRLDEG 2220
CG55069-02 2157 DQQLQTVLIERIMWRYNVYDLRGNLHLLRPSHSARITPLRYDLRKRITRLGQVQVRLDEG 2216

CG55069-01 2221 DFLRORGTETFEYSSKOLLTRVYSGSGOWTVIYRYDGLGRVSKTSLOQHLQFFYADLT 2280
CG55069-02 2217 DFLRORGTETFEYSSKOLLTRVYSGSGOWTVIYRYDGLGRVSKTSLOQHLQFFYADLT 2276

CG55069-01 2281 VPTRITHVYHNSSEITSLYVDLQHLFAMEISODEFYIASDNTOTPLAVFSSNOLMLN 2340
CG55069-02 2277 VPTRITHVYHNSSEITSLYVDLQHLFAMEISODEFYIASDNTOTPLAVFSSNOLMLN 2336

CG55069-01 2341 QIQVTAQYELIFDSNIDFQVLIQFHGGLYDPLTKLIHFGEDVDILAGRWTTPDIEIWK 2400
CG55069-02 2337 QIQVTAQYELIFDSNIDFQVLIQFHGGLYDPLTKLIHFGEDVDILAGRWTTPDIEIWK 2396

CG55069-01 2401 IGRDPAFPHLYMFRNNPASKIHVDYDITDYNHSLVTFQPHLHNAIQGFVAFEDLTER 2460
CG55069-02 2397 IGRDPAFPHLYMFRNNPASKIHVDYDITDYNHSLVTFQPHLHNAIQGFVAFEDLTER 2456

CG55069-01 2461 SYELVKSQQWDDIPPIFGVQGVARQAKAFSLQKMAEVQVSRRAAGQASLWFAIVKS 2520
CG55069-02 2457 SYELVKSQQWDDIPPIFGVQGVARQAKAFSLQKMAEVQVSRRAAGQASLWFAIVKS 2516

CG55069-01 2521 LIQKQVMLAYSQQRVQTHVLIIMHEDGIEKAAVLIHAFYLEHLEHTIEOKDTHYPIKITT 2580
CG55069-02 2517 LIQKQVMLAYSQQRVQTHVLIIMHEDGIEKAAVLIHAFYLEHLEHTIEOKDTHYPIKITT 2576

CG55069-01 2581 PESDLOTLRLTSORKALENGIVTVSQSTTVVNGRTRFADVEMOGALALHVRVOMTLD 2640
CG55069-02 2577 PESDLOTLRLTSORKALENGIVTVSQSTTVVNGRTRFADVEMOGALALHVRVOMTLD 2636

CG55069-01 2641 EKAIRILEQARQALARAWAREQQRVVDGEGEAGFLWTEGKROLLSAGKQGYDGYVYS 2700
CG55069-02 2637 EKAIRILEQARQALARAWAREQQRVVDGEGEAGFLWTEGKROLLSAGKQGYDGYVYS 2696

CG55069-01 2701 VEQVPELADSAIHIQFLQSEIGRR 2720
CG55069-02 2697 VEQVPELADSAIHIQFLQSEIGRR 2721

